

<b>Strategic Biosolutions</b>	)	<b>Departmental</b>
<b>Cumberland County</b>	)	<b>Findings of Fact and Order</b>
<b>Windham, Maine</b>	)	<b>Air Emission License</b>
<b>A-124-71-C-R</b>	)	

After review of the air emissions license application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

**I. REGISTRATION**

**A. Introduction**

Strategic BioSolutions of Windham, Maine has applied to renew their Air Emission License permitting the operation of emission sources associated with their Class IV-A (veterinary) incinerator, to dispose of animal remains. Strategic BioSolutions was formerly know as Atlantic Antibodies, but changed their name and transferred their air emission license in the spring of 1999 when they were purchased by Strategic Diagnostics.

Two existing emergency generators were previously unlicensed. They have been included in this license and emission calculations have been adjusted to reflect their addition.

**B. Emission Equipment**

One Consumat Systems Model #C-75P, with the following specifications:

Incinerator Class	IV-A
Number of Chambers	2
Type of Waste	Type 4
Max. Design Destruction Rate	175 lb/hr
Auxilliary Fuel Input	LPG
Primary Chamber	700,000 total Btu/hr (2 burners)
Secondary Chamber	1,000,000 Btu/hr
Emissions Control	Afterburner

The incinerator combustion gases vent to a 20.3 foot AGL (above ground level) stack with a diameter of 17 inches.

**Electrical Generation Equipment**

<b><u>Equipment</u></b>	<b><u>Maximum Capacity (MMBtu/hr)</u></b>	<b><u>Maximum Firing Rate (gal/hr)</u></b>	<b><u>Power Rating kW</u></b>	<b><u>Fuel Type</u></b>
Generator #1	0.62	6.6	55	LPG
Generator #2	0.51	5.4	45	LPG

Strategic BioSolutions also operates six (6) identical HVAC units, each rated at 135,000 Btu/hr, and two propane-fired residential size furnaces. These units are considered insignificant as defined by MEDEP Chapter 115, Appendix B, and are listed here for inventory purposes only.

C. Application Classification

The application for Strategic BioSolutions does not include the licensing of increased emissions or the installation of new or modified equipment. Therefore, the license is considered to be a renewal of current licensed emission units only.

**II. BEST PRACTICAL TREATMENT (BPT)**

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Department regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emission from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Consumat Systems Model #C-75P Incinerator

Strategic BioSolutions operates one Consumat Model #C-75P incinerator, manufactured in 1986, with a maximum destruction rate of 175 lb/hr and firing LPG as auxiliary fuel in two 0.35 MMBtu/hr burners and one 1 MMBtu/hr burner. The incinerator is not subject to New Source Performance Standards (NSPS).

BPT for the incinerator is the following:

1. A maximum particulate emission rate of 0.12 gr/dscf corrected to 12% CO<sub>2</sub>.
2. SO<sub>2</sub>, NO<sub>x</sub>, CO and VOC emission rates based AP-42 emission factors.
3. The firing of LPG as an auxiliary fuel.
4. Visible emissions from the incinerator shall not exceed 10% on a 6-minute block average basis.
5. Operating temperature in the secondary chamber or refractory lined stack shall be maintained at or above 1600°F, with a stack gas retention time, at or above 1600°F, of at least 0.5 second.
6. To insure an efficient burn, and to prevent odors and visible emissions, the secondary chamber will be preheated, as specified by the manufacturer, until the pyrometer temperature measures at least 1600°F.
7. The temperature in the secondary chamber shall be maintained at 1600°F for the duration of the burn cycle.
8. A pyrometer and 1/4 inch test port shall be installed and maintained at that location of the incinerator or refractory lined stack which provides sufficient volume to insure a flue gas retention time of not less than 0.5 second at a minimum of 1600°F.
9. Maintenance of a log recording the weight of the waste charged, preheat time, and temperature of the secondary chamber every 60 minutes after start-up until, and including, final shutdown time. For facilities operating a chart recorder, the start time, date, and weight charged shall be logged on the chart.
10. Ash disposal in accordance with the requirements of the Bureau of Remediation and Waste Management.
11. The incinerator operator(s) shall receive adequate training to operate the incinerator in accordance with the manufacturer's specifications and shall be familiar with the terms of the Air Emission License.

C. Emergency Generators

Strategic BioSolutions operates two propane fired emergency generators. Generator #1 is a 55 kW unit located behind the office and labs and generator #2 is a 45 kW unit positioned next to barn #6. The generators are not subject to NSPS.

BPT for each unit is the following:

- Operation limited to 500 hours/year on a 12 month rolling year basis;
- The use of LPG;
- PM<sub>10</sub>, NO<sub>x</sub>, CO and VOC lb/MMBtu emission limits based on AP-42 data dated 7/00 for natural gas fired engines and a PM lb/hour emission limit based on the PM<sub>10</sub> limit;

- Visible emissions from each generator #1 and #2 shall not exceed 10% opacity on a 6-minute block average, except for no more than two 6-minute block averages in a 3-hour period.

D. Annual Emission Restrictions

Strategic BioSolutions shall be restricted to the following annual emissions, based on a 12 month rolling total. Annual emissions have been calculated assuming continuous operation of the incinerator and 500 hours per year for each generator.

**Total Allowable Annual Emission for the Facility**  
(used to calculate the annual license fee)

<u>Pollutant</u>	<u>Tons/Year</u>
PM	2.4
PM <sub>10</sub>	2.4
SO <sub>2</sub>	0.13
NO <sub>x</sub>	3.1
CO	1.4
VOC	0.12

**III.AMBIENT AIR QUALITY ANALYSIS**

According to Maine Regulations Chapter 115, the level of air quality analyses required for a renewal source shall be determined on a case-by case basis. Based on the above total facility emissions, Strategic BioSolutions is below the emissions level required for modeling and monitoring.

**ORDER**

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-124-71-C-R subject the following conditions:

**STANDARD CONDITIONS**

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (Title 38 MRSA §347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115.
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both.
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request.
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353.
- (6) The license does not convey any property rights of any sort, or any exclusive privilege.
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions.
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request.
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned

- changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license.
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license.
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
- (i) perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
    - (a) within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
    - (b) pursuant to any other requirement of this license to perform stack testing.
  - (ii) install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
  - (iii) submit a written report to the Department within thirty (30) days from date of test completion.
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- (i) within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
  - (ii) the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and

- (iii) the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement.
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation.
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.

## **SPECIFIC CONDITIONS**

- (16) Consumat Model #C-75P Incinerator
  - (i) The incinerator shall not exceed the maximum design destruction rate of 175 lbs per hour. Auxiliary fuel input (LPG) to the primary chamber and secondary chambers shall not be less than 0.7 MMBtu/hr (0.35 MMBtu/hr to each of two burners) and 1 MMBtu/hr, respectively.
  - (ii) The incinerator shall be used for the disposal of type 4 (veterinary) waste and shall not be used for the disposal of any plastics, cytotoxic (antineoplastic) drugs or any radioactive wastes and shall not be used to dispose of any medical waste.
  - (iii) Strategic BioSolutions shall not exceed a particulate matter emission rate of 0.12 gr/dscf corrected to 12% CO<sub>2</sub>. Therefore, based on the maximum design combustion rate and continuous operation of the Class IV-A incinerator, emissions shall be limited to the following:

	PM	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
gr/dscf	0.12	N/A	N/A	N/A	N/A	N/A
lb/hr	0.55	0.55	0.03	0.50	0.06	0.02

Compliance shall be demonstrated through stack testing in accordance with the appropriate method found in 40 CFR Part 60, Appendix A, and by request of the Department.

- (iv) Visible emissions from the incinerator shall not exceed 10% on a 6-minute block average basis.
  - (v) A log will be maintained recording the weight of the waste charged, preheat time, charging time and the temperature of the secondary chamber every 60 minutes after start-up until, and including, final shutdown time. For facilities operating a chart recorder, the start time, date, and weight charged shall be logged on the chart. The log shall be maintained according to Condition 8.
  - (vi) The secondary chamber shall be preheated to a minimum of 1600°F prior to the burning of any waste, and shall be maintained at or above 1600°F with a stack gas retention time, at or above 1600°F, of at least 0.5 seconds.
  - (vii) A pyrometer and 1/4 inch test port shall be installed and maintained at that location of the incinerator or refractory lined stack which provides sufficient volume to insure a flue gas retention time of not less than 0.5 seconds at a minimum of 1600°F. The temperature shall be recorded according to Condition 16(v).
  - (viii) The incinerator combustion gases shall vent to a stack of at least 20.3 feet AGL.
  - (ix) The ash will be disposed of in accordance with the requirements of the Bureau of Remediation and Waste Management.
  - (x) The incinerator operator(s) shall receive adequate training to operate the incinerator in accordance with the manufacturer's specifications and shall be familiar with the terms of the Air Emission License.
  - (xi) Although it is not required at the present time, the installation and operation of continuous chart recording devices may become necessary to document compliance with the temperature requirements of this license. Should the Bureau of Air Quality determine that continuous recording devices are necessary, the licensee shall, within 120 days, demonstrate that continuous recorders have been installed and are operational.
- (17) Emergency Generators #1 and #2
- (i) Emergency Generators #1 and #2 shall each be limited to 500 hours of operation per 12 month rolling year. Hour meters shall be installed and operated on each unit.
  - (ii) The emergency generators shall each fire LPG.



- (iii) A log shall be kept documenting the dates, times and reason of operation each time the emergency generator is operated.
- (iv) Emissions from the generators shall not exceed the following:

**Generator Emission Limits**

<b><u>Pollutant</u></b>	<b><u>Generator #1 (lb/hr)</u></b>	<b><u>Generator #2 (lb/hr)</u></b>
PM	0.02	0.02
PM <sub>10</sub>	0.02	0.02
SO <sub>2</sub>	Negligible	Negligible
NO <sub>x</sub>	2.0	1.6
CO	2.4	2.0
VOC	0.08	0.06

Compliance shall be demonstrated on request of the Department through stack testing in accordance with the appropriate method found in 40 CFR Part 60, Appendix A.

- (v) Visible emissions from each of the emergency generators shall not exceed 10% opacity on a 6-minute block average, except for no more than two 6-minute block averages in a 3-hour period.
- (18) Strategic BioSolution shall submit an application for an amendment prior to running the Emergency Generator as a Dispatchable Load Generator. The amendment will reflect this change and the hours of operation will be reduced from 500 to 250 hours per year (based on a 12 month rolling total).
  - (19) Strategic BioSolutions shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 MRSA §605-C).
  - (20) Strategic BioSolutions shall pay the annual air emission license fee within 30 days of December 31 of each year. Pursuant to 38 MRSA §353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under 38 MRSA §341-D, subsection 3.

**Strategic BioSolutions  
Cumberland County  
Windham, Maine  
A-124-71-C-R**

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**Departmental  
Findings of Fact and Order  
Air Emission License**

(21) The term of this Order shall be for five (5) years from the signature below.

DONE AND DATED IN AUGUSTA, MAINE THIS                      DAY OF                      2002.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: \_\_\_\_\_  
MARTHA G. KIRKPATRICK, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: June 12, 2002

Date of application acceptance: June 13, 2002

Date filed with the Board of Environmental Protection: \_\_\_\_\_

This Order prepared by Rachel E. Pilling, Bureau of Air Quality